

and some other naturalists. It rests on the assumption that the polypidom is extravascular and inorganic, so that after its first solidification, it suffers no alteration in form and quality, beyond what is evidently effected by the operation of chemical and mechanical causes: the changes resulting from its increase in size, are not from the activity and pulsion of any inherent principle, but from the super-imposition of additional layers, or from the additions of new cells, or from the prolongation of the tubes, which additions are all coetaneous with the growth and multiplication of the polypes, and the results of new secretions. Linnæus, Pallas and Baster opposed Ellis, and believed in a vegetative principle, inherent in the polypidom itself, so that its growth was in some measure independent of the living tenant; and various arguments have been brought forward by Bory de St Vincent,* which appear to him to demonstrate the truth of this doctrine. We may act, however, not unreasonably in withholding our assent, for with such a feeble and errant point was the argument handled that few felt its force, and the discussion has continued even to this day in an unsettled state. It seems probable in fact that neither theory will explain the growth of all polypidoms; and as the peculiarities which distinguish these are considerable and would render a general description involved and obscure, I shall reserve the explanation of their mode of increase for a section in the preface to each separate order. Enough has in the meantime been said to show how unimportant the polypidom must be as a *primary* character in a natural classification of zoophytes, and yet, until very recently, no other basis was looked for or deemed available, and hence the artificialness of the proposed "Systems" which, as a matter of history, we now venture to review.

THE CLASSIFICATIONS OF ZOOPHYTES.

The main object of Ellis being to prove the animality of zoophytes, he deemed a new classification of them unnecessary, and, as it was sufficient for his purpose, he followed very closely that which had been proposed by Ray in his Synopsis of British Plants. † In successive chapters he treats of the vesiculated corallines (Sertulariadae), the tubular corallines (Tubulariæ), of the cel-

* Encyclop. Method. art. Zoophyte.

† Syn. Meth. Stirpium Brit. Edit. 3. Lond. 1724.